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EXAMINER

YAMNITZKY, MARIE ROSE

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/647,353

Applicant(s)

IGARASHI, TATSUYA

Examiner

Marie R. Yamnitzky

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 12, 13, 15-19 and 23-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☒ Claim(s) 1, 12, 13, 15, 16, 25 and 28 is/are rejected.
- 7) ☒ Claim(s) 17-19, 23, 26, 27 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

1. This Office action is in response to applicant's amendment filed August 15, 2005, which amends claims 1, 12, 15, 16 and 23, cancels claims 2-11, 14 and 20-22, and adds claims 24-29.

This Office action is also in response to the certified translation of applicant's foreign priority application JP 11-304206 (10/22/99) filed August 15, 2005.

Claims 1, 12, 13, 15-19 and 23-29 are pending.

2. The rejection under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, as set forth in the Office action mailed April 15, 2005, is rendered moot by claim cancellation.

The rejection under 35 U.S.C. 102(b) based on Shi et al. (US 5,935,721) is rendered moot in part by claim cancellation and otherwise overcome by amendment.

The rejection under 35 U.S.C. 102(e) based on Bock et al. (US 6,437,123 B1) is rendered moot in part by claim cancellation and otherwise overcome by amendment.

The rejections under 35 U.S.C. 102(e) and 103(a) based on Kita et al. (US 6,656,608 B1) are rendered moot in part by claim cancellation and partly overcome by amendment. While Kita et al. disclose or suggest the limitations of some of the present claims (e.g. claims 15 and 16), the rejections based on the Kita patent are withdrawn in consideration of the certified translation of foreign priority application JP 11-304206.

3. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 28 places further limitations on “the fused arylene group having at least four rings”. Claim 28 depends from claim 27, which requires each of Ar<sup>12</sup>, Ar<sup>22</sup> and Ar<sup>32</sup> to represent a fused arylene group having at least four rings. Claim 27 depends from claim 1, which requires each of Ar<sup>11</sup>, Ar<sup>21</sup> and Ar<sup>31</sup> to represent a phenanthrenylene group or a fused arylene group having at least four rings. It is not clear if the fused arylene group that is further limited according to claim 28 pertains only to Ar<sup>12</sup>, Ar<sup>22</sup> and Ar<sup>32</sup>, or to Ar<sup>11</sup>, Ar<sup>21</sup> and Ar<sup>31</sup> as well.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 12, 13, 15, 16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fink et al. (US 6,352,791 B1).

For example, see the abstract, formulae (I) in column 2, the last four formulae in c. 2, the first-eighth formulae in c. 3, and c. 5, l. 31-34. With respect to the third-eighth formulae shown in c. 3, one of ordinary skill in the art would recognize that monovalent radicals would be used for R<sub>1</sub>-R<sub>3</sub> of formula (I).

Compounds of present formula (1) wherein each of Ar<sup>11</sup>, Ar<sup>21</sup> and Ar<sup>31</sup> represents a fused arylene group having at least four rings, such as perylenylene, and each of Ar<sup>12</sup>, Ar<sup>22</sup> and Ar<sup>32</sup> represents a substituent group, would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention given Fink's disclosure of triazine compounds having three aromatic substituents on the triazine ring, wherein one or more of the three aromatic substituents may be a perylene group. Fink's compound of formula (I) in which R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are organic radicals represented by any of the last formula in column 2 or the first or second formula in column 3 is a compound of formula (1) as defined in present claim 1 and further defined in present claims 12 and 13.

Compounds of present formula (1) wherein each of Ar<sup>11</sup>, Ar<sup>21</sup> and Ar<sup>31</sup> represents a fused arylene group, and each of Ar<sup>12</sup>, Ar<sup>22</sup> and Ar<sup>32</sup> represents a fused arylene group, would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention given Fink's

disclosure of triazine compounds having three aromatic substituents on the triazine ring, wherein one or more of the three aromatic substituents may be a binaphthalene group. Fink's compound of formula (I) in which  $R_1$ ,  $R_2$  and  $R_3$  are organic radicals represented by any of the third-eighth formulae in column 3 is a compound of formula (1) as defined in present claim 15 and further defined in present claim 16.

Compounds of present formula (1) wherein each of  $Ar^{11}$ ,  $Ar^{21}$  and  $Ar^{31}$  represents an arylene group, at least one of which is a fused arylene group such as an anthrylene group or a perylenylene group, and each of  $Ar^{12}$ ,  $Ar^{22}$  and  $Ar^{32}$  represents a substituent group, would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention given Fink's disclosure of triazine compounds having three aromatic substituents on the triazine ring, wherein one or more of the three aromatic substituents may be an anthracene group or a perylene group. Fink's compound of formula (I) in which at least one of  $R_1$ ,  $R_2$  and  $R_3$  is an organic radical represented by any of the last four formulae in column 2 or the first two formulae in column 3 is a compound of formula (1) as defined in present claim 25.

Fink's triazine compounds are disclosed for use in a light emitting device comprising an anode and a cathode.

7. Claims 17-19, 26 and 27 are objected to because of the following informalities:

The "ene" suffix should not be used in the names for the groups represented by  $Ar^{12}$ ,  $Ar^{22}$  and  $Ar^{32}$ . For example, in claim 17, "phenanthrenylene" and "arylene" should read

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--phenanthrenyl-- and --aryl--, respectively. In the previous Office action, the examiner stated that references to "arylene" groups are interpreted as encompassing "aryl" groups. Upon further consideration, recitation of "arylene" and recitation of specific "ene" groups for the groups represented by Ar<sup>12</sup>, Ar<sup>22</sup> and Ar<sup>32</sup> is not appropriate because the "ene" suffix indicates a divalent radical whereas Ar<sup>12</sup>, Ar<sup>22</sup> and Ar<sup>32</sup> as shown in formula (1) represent monovalent radicals.

Appropriate correction is required. Claims 17-19, 26 and 27 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, with correction of the noted informalities.

8. Claim 24 is allowed.

9. Claims 23 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
October 29, 2005



MARIE YAMNITZKY  
PRIMARY EXAMINER

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